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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/603,698	06/26/2000	Akira Ishikawa	MAT-7983US	2691

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EXAMINER	
HALIM, SAHERA	

ART UNIT	PAPER NUMBER
2157	12

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/603,698	ISHIKAWA ET AL.	
	Examiner	Art Unit	
	Jack P Nguyen	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is in response to Amendment filled on March 08, 2004.

2. Claims 1-14 are pending examinations.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 7, 8, 11, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Akatsu et al., U.S. Pat. No. 6,496,862 (hereinafter Akatsu).

3. Regarding claim 1, Akatsu teaches a gateway (GW) apparatus for communicating between network said GW apparatus comprising (figure 5 and abstract):

(a) first message input/output means for sending and receiving a message to/from a first network (figure 5, col. 3, line 33 – 57);

(b) second message input/output means for communicating with a second network based on an internet protocol IP (figure 5, col. 3, line 33 – 57);

(c) a first plug-in detector for detecting a plug-in of a first device to the first network (col. 14, line 66 – col. 15, line 8);

(d) a virtual device functioning as a gateway for the first device plugged in the first network and a second device plugged in the second network to communicate with each other, said virtual device converting commands issued by each of the first and second devices into commands the second and first devices, respectively, comprehend so that the commands are executable by the first and second devices; (Figure 5, Fig 9-12 and element 504);

(e) a virtual-device-controller for providing said virtual device corresponding to the first, device plugged-in with an IP identifier for the second network to access said virtual device responsive to information supplied from said first plug-in detector (col.10, line 6 – 66, col. 12, line 16 – 44 and col. 13, line 1 – col. 14, line 65);

(f) a pseudo-address generator for generating a pseudo address for said virtual device to communicate with the first device in the first network upon receiving a connection request from the second device in the second network, and for outputting the pseudo address to said virtual-device-controller (col. 14, line 11 – col. 15, line 62); and

(g) an address-correspondence-controller (the service controller 808) for controlling correspondence between the IP identifier and the pseudo address provided to said virtual device by said virtual-device-controller (col. 14, line 11 – col. 15, line 62).

4. Regarding claim 7, Akatsu teaches a GW apparatus as defined in Claim 1 wherein said virtual device includes:

(d-1) a connection controller for controlling a correspondence between the first device and the second device (col. 13, line 2 – col. 14, line 54);

(d-2) a command converter for converting a first command issued from the first network into a second command issued from the second network and vice versa (col. 7, line 50 – 60 and col. 10, line 6 – line 65);

(d-3) a command-correspondence-controller for controlling a correspondence between the first; anal the second commands (col. 12 line 16 – 56); and

(d-4) an address converter for transferring a first message issued from the first network to the second network and vice versa (col. 13, line 2 – col. 14, line 54).

5. Reference to claim 8, Akatsu discloses a method of gateway for communicating between a first device plugged in a first network and a second device plugged in a second network by using a virtual device; said method comprising:

(a) transmitting and receiving a message to/from the first network (figure 5, col. 3, line 33 – 57);

(b) communicating with the second network following an internet protocol (IP) (figure 5, col. 3, line 33 – 57);

(c) acquiring information about the first device by detecting a plug-in of the first device in the first network (col. 14, line 66 – col. 15, line 8);

(d) providing an IP identifier to the virtual device corresponding to the first device plugged in the first network responsive to the information acquired in step (c) for accessing to the virtual device from the second network (col. 14, line 11 – col. 15, line 62);

(e) upon receiving a connection request from the second device, the virtual device generates a pseudo address for communicating with the first device plugged in the first network (col. 14, line 11 – col. 15, line 62); and

(f) converting commands issued by each of the first and second devices into commands the second and first devices, respectively, comprehend so that the commands are executable by the first and second devices (col. 10, lines 16 – 19 and 39 – 41), and

(g) communicating between the first network and the second network responsive to the correspondence between the pseudo addresses provided to the virtual device and the IP identifier (col. 14, line 11 – col. 15, line 62).

6. Since claim 14 has similar limitations to claim 7, it is rejected under the same rational.

7. Regarding claim 11, Akatsu disclose the method of gateway as defined in claim 8 further comprising:

(k) carrying out a stream transfer between devices of the first network (col. 10, line 1 – 63 and col. 18 lines 19 – 63);

(1) storing a correspondence between an identifier of stream input/output plug of the first network and a stream port of the second network (col. 10, line 1 – 63 and col. 18 lines 19 – 63);

(m) converting a stream packet of the first network to/from a stream packet of the second network, and transmitting/receiving the packet converted (col. 10, line 1 – 63 and col. 18 line 19 – 63); and

(n) establishing a stream connection to the second device plugged in the second network, and holding a band (col. 10, line 1 – 63 and col. 18 line 19 – 63),

wherein said method carries out the stream transfer between the first network and the second network (col. 10, line 1 – 63 and col. 18 line 19 – 63).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 2-6, 9, 10, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akatsu in view of Peter M. Corcoran "Mapping Home-Network Appliances to TCP/IP Sockets Using A Three-Tiered Gateway Architecture" (hereinafter Corcoran).

10. Regarding claim 2 Akatsu does not disclose (h) a second plug-in detector for detecting a plug-in of the second device by monitoring "a directory supplying information about the second device in the second network". However, Akatsu discloses a first plug-in detector for plug-in of the first device in the first network (col. 14, line 66 – col. 15, line 8). It would have been obvious for a person having ordinary skill in the art at the time of the invention to add a second plug-in into the invention of Akatsu in order to allow the second network to manage it is devices and resource more effectively. Moreover, Akatsu does not disclose (i) a registry in the first network,

wherein said virtual-device-controller further acquires the information about the second device from the directory, and establishes a virtual device corresponding to the second device based on the information acquired,

wherein said GW apparatus allows the first device to detect the second device plugged in the second network and acquires interface information via the registry.

However, these limitations are well known in the art as evidenced by Corcoran. Corcoran discloses (i) a registry in the first network (page 731, col. 1 and 2) wherein said virtual-device-controller further acquires the information about the second device from the directory, and establishes a virtual device corresponding to the second device based on the information acquired (page 731, col. 1 and 2),

wherein said GW apparatus allows the first device to detect the second device plugged in the second network and acquires interface information via the registry (page 731, col. 1 and 2).

It would have been obvious for one having ordinary skill in the art at the time of the invention to combine the teachings of Corcoran and Akatsu in order to enable the communication of the two devices in an efficient manner.

11. Since claim 9 has similar limitations to claim 2, it is rejected under the same rational.

12. Regarding claim 3, Akatsu does not teach (j) a directory register for registering information about the first device plugged in the first network to the directory of the second network,

wherein said first plug-in detector detects the plug-in of the first device by monitoring an event in the first network,

wherein said virtual-device-controller acquires information about the first device plugged in the first network from a registry on the first network, and has said virtual device include a virtual device corresponding to the first device plugged in the first network based on the information acquired;

wherein said GW apparatus allows the second device to detect the first device plugged in the first network via a registry on the second network.

However, Corcoran discloses (j) a directory register for registering information about the first device plugged in the first network to the directory of the second network (page 731, col. 1 and 2),

wherein said first plug-in detector detects the plug-in of the first device by monitoring an event in the first network (page 732, col. 1 and 2),

wherein said virtual-device-controller acquires information about the first device plugged in the first network from a registry on the first network, and has said virtual device include a virtual device corresponding to the first device plugged in the first network based on the information acquired (page 734, col. 1 and 2);

wherein said GW apparatus allows the second device to detect the first device plugged in the first network via a registry on the second network (page 734, col. 1 and 2).

It would have been obvious for one having ordinary skill in the art at the time of the invention to combine the teachings of Corcoran and Akatsu to enable the two networks to communicate with each other in an organized manner.

13. Since claim 10 has similar limitations to claim 2 and 3, it is rejected under the same rational.

14. Reference to claim 4, Akatsu discloses (k) a stream controller for controlling a stream transfer between devices on the first network (col. 10, line 1 – 63 and col. 18 line 19 – 63);

(1) a stream-port-correspondence-controller for controlling correspondence between a stream input/output identifier on the first network and a stream port on the second network (col. 10, line 1 – 63 and col. 18 line 19 – 63);

(m) a stream packet converter for converting a stream packet on the first network to a stream packet on the second network and vice versa, and sends/receives thereof (col. 10, line 1 – 63 and col. 18 line 19 – 63),

wherein said virtual device establishes a stream connection to the second device plugged in the second network, and has a stream generator for holding a band (col. 10, line 1 – 63 and col. 18 line 19 – 63),

wherein said GW apparatus transfers a stream between a device on the first network and a device on the second network (col. 10, line 1 – 63 and col. 18 line 19 – 63).

15. Regarding claim 5, Akatsu does not disclose (o) an information acquirer for acquiring information necessary for forming a user interface;

(p) a user interface (UI) generator for generating a UI to be used on the second network based on the information acquired; and

(q) a UI provider for transferring the UI generated when the second device requests to access to the first network,

wherein said virtual-device-controller detects a plug-in of a device to the first network, and determines whether or not the device plugged-in supports a protocol on the first network, anal when said controller determines the protocol is supported, said information acquirer acquires information for forming the UI by communicating with the device,

wherein said GW apparatus allows the second device on the second network to display the UI for manipulating the first device on the first network.

However, Corcoran discloses (o) an information acquirer for acquiring information necessary for forming a user interface (page 733 –734);

(p) a user interface (UI) generator for generating a UI to be used on the second network based on the information acquired (page 733 –734); and

(q) a UI provider for transferring the UI generated when the second device requests to access to the first network (page 733 –734),

wherein said virtual-device-controller detects a plug-in of a device to the first network, and determines whether or not the device plugged-in supports a protocol on the first network, anal when said controller determines the protocol is supported, said information acquirer acquires necessary information for forming the UI by communicating with the device (page 733 –734),

wherein said GW apparatus allows the second device on the second network to display the UI for manipulating the first device on the first network (page 733 –734).

It would have been obvious for one having ordinary skill in the art at the time of the invention to combine the teachings of Corcoran and Akatsu to allow the two devices to display information on a UI.

16. Claim 12 has similar limitations as claim 5, thus it is rejected under the same rational.

17. Regarding claim 6, Akatsu does not disclose (r) a registry of the first network;

(s) a downloader for downloading information to said virtual device by accessing to an information-provider- site providing information about said virtual device;

wherein said virtual-device-controller detects a plug in of the first device in the first network, searches the registry for information about the first device plugged in the first network, and acquires the information,

wherein said virtual-device-controller further includes an information acquirer for acquiring the information from the provider site based on the first device plugged in the first network information acquired from the registry when said controller determines one of two cases; (i) a first case where said virtual device does not include a virtual device corresponding to one of the first device plugged in the first network and the second device plugged in the second network, and (ii) a second case where said virtual-device-controller determines that said virtual device needs to update a software version thereof.

However, Corcoran discloses (r) a registry of the first network (page 731, col. 1 and 2). It would have been obvious for one having ordinary skill in the art at the time of the invention to implement a registry of Corcoran into the invention of Akatsu to reduce processing time by allowing the device to be registered in a registry. Nonetheless, Corcoran does not disclose the remaining limitations of this claim. However, it would have been obvious for one having ordinary skill in the art at the time of the invention to include an information provider site for providing virtual controller to detect plug-in associated with virtual devices and to determine device plug-in and updated software

into Corcoran and Akatsu because it would keep the virtual device more up to date and to operate effectively.

18. Since claim 13 has similar limitation to claim 6, it is rejected under the same rational.

Response to Arguments

19. Applicant's arguments filed on March 08, 2004 have been fully considered but they are not persuasive.

20. In response to the Applicant's arguments that Akatsu does not teach the conversion of commands issued by a device on one network such that the command can be comprehended by another device on another network, the examiner disagrees. First it has not been clearly claimed in the claims that the commands are commands such as "play". Assuming that the commands are commands such as play for the sake of argument, Akatus' invention still meets the limitations of the claims. As the applicant correctly recognized, Akatus teaches conversions of signals and data and it is well known in the art that signals are commands.

21. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In*

re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). It is argued that Akatsu does not disclose "the conversion of commands issued by a device on one network for causing a certain action such that the command can be executed by a device on a second network to cause the same action". However, claim 1 does not recite the above limitations. Claim 1 recites "... a virtual device functioning as a gateway for the first device plugged in the first network and a second device plugged in the second network to communicate with each other, said virtual device converting commands issued by each of the first and second devices, respectively, comprehend so that the commands are executable by first and second devices." The applicant again recognized correctly that Akatus teaches a remote monitoring and control of devices through a gateway that enables connection between the devices across networks and the gateway converts data and signals (commands) between the networks to enable communication. Without executing the signals (commands), Akatus devices would not have been able to communicate with each other.

22. In reference to claim 7, it is argued that Akatus does not teach a "command converter" or "command-correspondence-controller", the examiner disagrees. Again without these two limitations Akatus devices could not communicate. Moreover, Akatus teaches converting signals as conceded by the applicant, therefore, there has to be a converter that converts those signals.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sahera Halim whose telephone number is (703) 305-8054. The examiner can normally be reached on M-F from 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (703) 308-7562. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Sahera Halim
Patent Examiner
AU: 2157

May 24, 2004

ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
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